

WONDERLITE® PC-108U

Polycarbonate
CHI MEI CORPORATION

Message:

WONDERLITE® PC-108U is a Polycarbonate (PC) product. It can be processed by extrusion or injection molding and is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America.
Characteristics include:
Flame Rated
RoHS Compliant
UV Stabilized

General Information			
UL YellowCard	E56070-100269748	E56070-100239150	
Additive	UV Stabilizer		
RoHS Compliance	RoHS Compliant		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	8.0	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	6.50	cm³/10min	ISO 1133
Molding Shrinkage			ASTM D955
Flow	0.50 to 0.70	%	
Across Flow	0.50 to 0.70	%	
Water Absorption (23°C, 24 hr)	0.20	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	77		ASTM D785
Ball Indentation Hardness (H 358/30)	100	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Yield, 3.18 mm ¹	61.8	MPa	ASTM D638
Yield	65.0	MPa	ISO 527-2/50
Break	75.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield, 3.18 mm ²	6.0	%	ASTM D638
Break, 3.18 mm ³	110	%	ASTM D638
Break	120	%	ISO 527-2/50
Flexural Modulus			
6.35 mm ⁴	2350	MPa	ASTM D790
-- ⁵	2400	MPa	ISO 178

Flexural Strength			
6.35 mm ⁶	90.2	MPa	ASTM D790
-- ⁷	90.0	MPa	ISO 178
Compressive Strength	76.5	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	75	kJ/m ²	ISO 179
Notched Izod Impact			
3.18 mm	880	J/m	ASTM D256
--	80	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed ⁸	136	°C	ASTM D648
1.8 MPa, Unannealed ⁹	125	°C	ASTM D648
1.8 MPa, Unannealed	127	°C	ISO 75-2/A
1.8 MPa, Annealed	142	°C	ISO 75-2/A
Vicat Softening Temperature			
--	148	°C	ASTM D1525, ISO 306/A50 ⁷ ¹⁰
--	143	°C	ISO 306/B50
CLTE - Flow (44 to 100°C)	6.0E-5 to 8.0E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.20	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	3.0E+16	ohms · cm	ASTM D257
Dielectric Strength (1.60 mm)	30	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	2.95		
1 MHz	2.90		
Dissipation Factor			ASTM D150
60 Hz	4.0E-4		
1 MHz	9.0E-3		
Arc Resistance ¹¹	110	sec	ASTM D495
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm	HB		
3.00 mm	HB		
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.585		ASTM D542
Transmittance (76200 µm)	88.0	%	ASTM D1003
Haze (81300 µm)	< 0.80	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	4.0	hr	

Rear Temperature	230 to 300	°C
Middle Temperature	250 to 320	°C
Front Temperature	250 to 310	°C
Mold Temperature	70.0 to 120	°C

NOTE

1.	6.0 mm/min
2.	6.0 mm/min
3.	6.0 mm/min
4.	2.8 mm/min
5.	2.0 mm/min
6.	2.8 mm/min
7.	2.0 mm/min
8.	120°C/hr
9.	120°C/hr
10.	Rate A (50°C/h), Loading 1 (10 N)
11.	Tungsten Electrode

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